

HM100PR
Density Monitors



HM100PR Density Monitors

Description

HM100PR Density Monitors are used to monitor SF₆ gas density in sealed tanks. They are applied to provide alarm signal outputs when the density reaches preset values. Furthermore, it can transmit the real-time SF₆ gas density data remotely, to achieve online remote monitoring function.. They are specifically designed for over 500kV EHV grade application field, adapting multi-level protection and full range of shielding measures to ensure the reliable operation of the products.

Features

- Suitable for indoor or outdoor installation.
 - Up to 4(four) sets of switch contacts toachieve over-pres-
sure alarm, dual alarm or double locking and many other
solutions, ensuring the monitoring more secure and relia-
ble.
- They adopt highly reliable protection circuit design, mul-
ti-level isolation and filtering technology, thus effectively
inhibiting the intrusion of conductive interference.
 - They adopt the full-body shield design, stainless steel shield-
ing shell, shielding junction box and shielding window glass,
thus ensuring the ability of anti-electromagnetic radiation
interference.
 - They are able to adopt the optic fiber communication back-
stage, thus avoiding data transmission losses from electro-
magnetic interference.
 - The use of high-precision SF₆ density algorithm ensures that
the background monitoring data coincides with those field
instructions.
 - They are compatible with ordinary SF₆ remote products.
They do not need other modifications in strong interference
occasions.
 - The temperature compensation device ensures higher meas-
urement accuracy.

Application

- SF₆ Gas Insulated Switchgear (GIS)
- SF₆ Insulated Circuit Breakers
- SF₆ Insulated Pole-Mounted Switch
- SF₆ Insulated Transformers
- SF₆ Insulated Current Transformers or Voltage
Transformers
- SF₆ Insulated Busbar Systems

Technical Parameters for Remote Module					
Power supply	☑ 24V DC	Anti-electromagnetic interference	IEC61000-4-2	level 4/A	(8KV/15kV)
Power consumption	< 2W		IEC61000-4-3	level 4/A	(30V/m)
Communication mode	RS485		IEC61000-4-4	level 4/A	(4KV)
Protocol	ModBus RTU		IEC61000-4-5	level 4/A	(+/-2Kv)
Baud rate	9600bps		IEC61000-4-6	level 3/A	(10V)
			IEC61000-4-8	level 5/A	(100A/m)
			IEC61000-4-9	level 5/A	(1000A/m)
			IEC61000-4-10	level 5/A	(100A/m)
			IEC61000-4-12	level 4/A	(4KV)
			IEC61000-4-17	level 3/A	(10%U _n)
			IEC61000-4-29	0.1s/A	(40%U _T /70%U _T)

Technical Parameters	
Case diameter	100mm
Scale range	-0.1 ~ 0.9MPa (customizable)
Accuracy	±1.0%FS (+20±1°C) , ±1.8%FS (-20°C~ +60°C) (gas phase)
Degree of protection	IP65
Ambient conditions	-20° C ~ +60° C, relative humidity ≤ 95%RH
Leakage rate	≤ 1×10 ⁻⁹ Pa·m ³ /s (Helium leakage inspection)
Process Connection	M20 × 1.5, (customizable)
Installation method	Radial or Axial
Electrical connection	Plug-in connection M20 × 1.5 sealing head cable size: 1.5mm ² recommended, upper limit 2.5mm ²
Contact insulation performance	Insulation resistance: >100MΩ (DC 500V) Withstand voltage: 2kV, 50/60Hz, 1min
Contact type	Magnetic snap-action switch 80%Ag, 20%Ni, 10μm Gold plated
Impact rating	50g (oil-filled), 30g (non-oil-filled)
Contact electrical parameters	30W/50VA, 1A (upper limit) 220VDC/380V 50/60Hz (upper limit)
Watch glass	Laminated safety glass
Weight	≈ 1.2kg
Pressure element	Bourdon tube

Options

- Oil-filled.
 - Wide temperature range : Optional-40°C~ +60°C or -60° C
~ +60° C.
- Measuring medium: SF₆, Air, N₂, SF₆ + N₂ and other gases.
 - Optional measurement accuracy: ±1.6%FS (+20±1°C) ,
±2.4%FS (-20°C~ +60°C) (gas phase) .

Dimensions

